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cont
in level of said selected at least one frequency band in one of said first and second signals results in a decrease in level of said selected at least one frequency band in the other of said first and second signals.

C 9
cont
28. (Amended) The apparatus of claim 24 wherein said first signal source includes an acoustic pressure microphone and said second signal source includes an accelerometer pickup.

29. (Amended) The apparatus of claim 24 wherein said first signal source includes an acoustic pressure microphone and said second signal source includes an electromagnetic pickup.

Marked versions of these claims are attached. Also, please add claims 36-43 as attached.

REMARKS

Applicants wish to thank Examiner Pendleton for granting an interview on July 26, 2002 to discuss the rejection of claim 1 in view of the Sims reference.

Claims 1-4, 8-21, 24-25, and 28-29 are pending in the present application. Claims 5-7, 22-23, 26-27, and 30-35 were canceled in response to a Restriction Requirement. Claims 1, 3-4, 8-9, 11, 19, 21, 24 and 28 have been amended. Claims 36-43 have been added. Claims 12-18 have been allowed.

Claim Rejections Under 35 U.S.C. §§ 102(b) and 103(a)

Claims 1-4 and 19-21 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,414,776 to Sims Jr. ("Sims"). Claims 8-11, 24, and 25 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sims in view of U.S. Patent No. 4,201,107 to Barber, Jr. ("Barber"). Claim 28 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sims in view of Barber in further view of U.S. Patent No. 5,809,843 to Barger et al. ("Barger"). Claim 29 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Sims in view of Barber in further view of U.S. Patent No. 4,524,667 to Duncan ("Duncan").

In response to this rejection and the Examiner interview conducted on July 26, 2002, Applicants have amended to claims to further bring out the feature of the present invention concerning the selection of frequency bands in first and second signals, and the modification of those signals concerning that selection. In view of the amendments to the claims, first and second signal processors work to each select at least one frequency band representing less than the frequency spectrum of the first and second signals and increase the level of the selected band(s) while decreasing the level of the selected band(s) in the other. The resulting signals may then be combined resulting in an improved output (e.g, when the selected frequency bands for the first and second signals relate to an unwanted signal contaminating them).

In view of the amendments and remarks above, Applicants submit that features of the claims are neither disclosed nor suggested by Sims and the remaining cited references. Accordingly, reconsideration and withdrawal of the rejection of claims 1-4, 8-11, 19-21, 24-25, and 28-29 under 35 U.S.C. §§ 102(b) and 103(a) is respectfully requested.

CONCLUSION

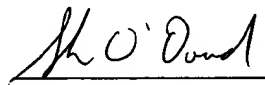
For all the above reasons, the Applicant respectfully submits that this application is in condition for allowance. A Notice of Allowance is earnestly solicited.

The Examiner is invited to contact the undersigned at (202) 220-4255 to discuss any matter concerning this application. The Office is hereby authorized to charge any additional fees or credit any overpayments under 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. 11-0600.

Respectfully submitted,
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Marked up copy of the amended claims:

1. (Twice amended) A method of modifying a signal comprising:

[Providing a first signal which includes an unwanted signal;]

[Providing an alternate signal which includes a lower proportion of said unwanted signal;]

Providing a first signal and a second signal, each of said first and second signals including a plurality of frequency bands;

Supplying said first and [alternate] second signals to said first and second signal processors, respectively;

Selecting at least one of said plurality of frequency bands with said first signal processor and selecting at least one of said plurality of frequency bands with said second signal processor, wherein said selections are less than a frequency spectrum of the plurality of frequency bands for said first and second signals; and

[Adjusting a level for a selected frequency band of said first signal and said alternate signal with said respective first and second processors, where said selected frequency band is less than a full frequency spectrum of said first and alternate signals, such that an increase of level in one of said first and alternate signals results in a decrease in level in the other of said first and alternate signals; and]

Adjusting a level for the at least one frequency band selected by said first processor with said first processor, and adjusting a level for the at least one frequency band selected by said second processor with said second processor, such that an increase in level of said selected at least one frequency band in one of said first and second signals results in a decrease in level of said selected at least one frequency band in the other of said first and second signals.

[Combining said first and alternate signals after said adjusting step.]

3. (Amended) The method of claim 1 further comprising:

Adjusting the level of the first and [alternate] second signals prior to providing said first and [alternate] second signals to said signal processors.

4. (Amended) The method of claim 1 further comprising:
Separately adjusting said selected frequency bands for the first and [alternate] second signals.
8. (Twice Amended) A method of processing signals comprising:
[Providing a first signal from a first position relative to an instrument which includes an unwanted signal;]
[Providing an alternate signal from a second position relative to said instrument which includes a lower proportion of said unwanted signal;]
Providing a first signal from a first position relative to an instrument and a second signal from a second position relative to said instrument, each of said first and second signals including a plurality of frequency bands;
Supplying said first and [alternate] second signals to at least first and second signal processors, respectively;
Selecting at least one of said plurality of frequency bands with said at least first signal processor and selecting at least one of said plurality of frequency bands with said at least second signal processor, wherein said selections are less than a frequency spectrum of the plurality of frequency bands for said first and second signals, and;
[Adjusting a level for a selected frequency band of said first signal and said alternate signal with said respective first and second processors, where said selected frequency band is less than a full frequency spectrum of said first and alternate signals, such that an increase of level in one of said first and alternate signals results in a decrease in level in the other of said first and alternate signals; and]
Adjusting a level for the at least one frequency band selected by said first processor with said first processor, and adjusting a level for the at least one frequency band selected by said second processor with said second processor, such that an increase in level of said selected at least one frequency band in one of said first and second signals results in a decrease in level of said selected at least one frequency band in the other of said first and second signals.
[Combining said first and alternate signals after said adjusting step.]

9. (Amended) The method of claim 8 further comprising:

Adjusting a gain of said first and [alternate] second signals prior to supplying said first and [alternate] second signals to said at least first and second signal processors [or groups of processors].

11. (Amended) The method of claim 10 wherein in said adjusting step, a preset ratio of a gain for the [alternate] second signal is between 11 and 5 dB lower than said gain for said first signal.

19. (Twice amended) An apparatus for modifying a signal comprising:

[a first signal source generating a first signal including an unwanted signal;]

[an alternate signal source providing an alternate signal including a lower proportion of said unwanted signal; and]

a first signal source generating a first signal and a second signal source generating a second signal, each of said first and second signals including a plurality of frequency bands;

[first and second signal processors adapted to receive said first and alternate signals, respectively, and adapted to adjust a level for a selected frequency band of said first signal and said alternate signal with said respective first and second processors, where said selected frequency band is less than a full frequency spectrum of said first and alternate signals, such that an increase of level in one of said first and alternate signals results in a decrease in level in the other of said first and alternate signals.]

first and second signal processors adapted to receive said first and second signals, respectively;

said first signal processor further adapted to select at least one of said plurality of frequency bands, wherein said selection is less than a frequency spectrum of the plurality of frequency bands for said first signal;

said second signal processor further adapted to select at least one of said plurality of frequency bands, wherein said selection is less than a frequency spectrum of the plurality of frequency bands for said second signal, and;

the first signal processor further adapted to adjust a level for the at least one frequency band selected by said first processor, and said second signal processor further adapted to adjust a level for the at least one frequency band selected by said second processor, such that an increase in level of said selected at least one frequency band in one of said first and second signals results in a decrease in level of said selected at least one frequency band in the other of said first and second signals.

21. (Amended) The apparatus of claim 19 wherein said selected frequency bands are separately adjusted for the first and [alternate] second signals.

24. (Twice Amended) An apparatus for processing signals comprising:

[a first signal source adapted to provide a first signal from a first position relative to an instrument which includes an unwanted signal;]

[an alternate signal source adapted to provide an alternate signal from a second position relative to said instrument which includes a lower proportion of said unwanted signal; and]

a first signal source adapted to provide a first signal from a first position relative to an instrument and a second signal source adapted to provide a second signal from a second position relative to said instrument, each of said first and second signals including a plurality of frequency bands;

[first and second signal processors adapted to receive said first and alternate signals, respectively, and adapted to adjust a level for a selected frequency band of said first signal and said alternate signal with said respective first and second processors, where said selected frequency band is less than a full frequency spectrum of said first and alternate signals, such that an increase of level in one of said first and alternate signals results in a decrease in level in the other of said first and alternate signals.]

first and second signal processors adapted to receive said first and second signals, respectively;

said first signal processor further adapted to select at least one of said plurality of frequency bands, wherein said selection is less than a frequency spectrum of the plurality of

frequency bands for said first signal;

second signal processor further adapted to select at least one of said plurality of frequency bands, wherein said selection is less than a frequency spectrum of the plurality of frequency bands for said second signal; and

the first signal processor further adapted to adjust a level for the at least one frequency band selected by said first processor, and said second signal processor further adapted to adjust a level for the at least one frequency band selected by said second processor, such that an increase in level of said selected at least one frequency band in one of said first and second signals results in a decrease in level of said selected at least one frequency band in the other of said first and second signals.

28. (Amended) The apparatus of claim 24 wherein said first signal source includes an acoustic pressure microphone and said [alternate] second signal source includes an accelerometer pickup.

29. (Amended) The apparatus of claim 24 wherein said first signal source includes an acoustic pressure microphone and said [alternate] second signal source includes an electromagnetic pickup.

New Claims to be added

36. (New Claim) The method of claim 1 wherein said selections are the same in both of said first and second signal processors.

37. (New Claim) The method of claim 1 further comprising combining said first and second signals after said adjusting step.

38. (New Claim) The method of claim 8 wherein said selections are the same in both of said at least first and second signal processors.

39. (New Claim) The method of claim 8 further comprising combining said first and second signals after said adjusting step.

40. (New Claim) The apparatus of claim 19 wherein said at least one of said plurality of frequency bands selected by said first and second processors are the same.

41. (New Claim) The apparatus of claim 19 further comprising a mixer to combine said first and second signals.

42. (New Claim) The apparatus of claim 24 wherein said at least one of said plurality of frequency bands selected by said first and second processors are the same.

43. (New Claim) The apparatus of claim 24 further comprising a mixer to combine said first and second signals after said adjusting step.